DOCUMENT RESUME

ED 032 281 SP 003 075

By-Worthen, Blaine R.

The Research Assistantship: A Look at the Folklore.

Ohio State Univ., Columbus. Evaluation Center.
Pub Date Feb 69
Note-17p.; Paper read at the American Educational Research Association annual meeting, Los Angeles, California, February 7, 1969.
Available from-The Ohio State University Evaluation Center, 1712 Neil Avenue, Columbus, Ohio 43210
EDRS Price MF-$0.25 HC-$0.95
Descriptors-Educational Researchers, Professional Training

The folklore surrounding research assistantships (the type of "research apprenticeship" that is held concurrently with a student's academic studies) must be investigated to determine what aspects of such experiences are most influential in motivating the assistant toward and preparing him for a productive research career. Unverified assumptions about the value of research assistantships impede the use of empirical analysis to advance knowledge about critical elements of research training. Research assistantships are not inherently valuable; rather, what a person does on his assistantship is related to what he does later in his career. Research assistants in education tend to engage in research significantly less than their counterparts in other fields. A dilemma basic to managing assistantships is the "conflict of interest" for the senior researcher needing help in menial tasks. Assistants themselves are ambivalent about the value of their work. If we accept the potential value of the research assistantship in training educational researchers and want to maximize it, then we need to accelerate assistantship opportunities, recruit students earlier in their program, and limit their tenure, assigning them primarily to research projects rather than to bureaus or individual faculty members. Their experiences should be planned and controlled by those most centrally involved in the conduct of research training programs. (Ten references are cited.) (JS)

ED032281

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

THE RESEARCH ASSISTANTSHIP: A LOOK AT THE FOLKLORE

Blaine R. Worthen

A Paper Read at the
American Educational Research Association
1969 Annual Meeting
Los Angeles, California
February 7, 1969

Evaluation Center
The Ohio State University
College of Education

SP00 3075

THE RESEARCH ASSISTANTSHIP: A LOOK AT THE FOLKLORE

The research apprenticeship has come to occupy a favored position in the lore and tradition of research training. Indeed, it can be said that the value of research apprenticeship experience is almost universally accepted as the most critical of the training components. The value of learning research by doing it has been repeatedly stressed, especially by those who argue that scientific method is pluralistic, perhaps even individualistic. In addition, several research studies have been interpreted as lending support to the value of apprenticeship experience. For example, Buswell and McConnell, et al. (1966) finding that the number of research courses taken is not related to subsequent productivity has enhanced the notion that apprenticeship to a senior researcher provides more meaningful research training than comparable effort devoted to coursework.

Advocates of apprenticeship training have spoken out clearly. For example, in outlining his program for promoting apprenticeship and, at the same time, overcoming the shortage of research courses due to faculty leaves to work on research, Buswell (1962) stated,

> My proposal is that we deliberately reduce the number of courses in education and plan in their place a program of student participation, as assistants or apprentices, in the major projects of the professors. (Buswell, 1962, p. 6).

Perhaps the strongest statement in support of research apprenticeship came from a group of prominent psychologists who participated in a seminar

conducted by the Education and Training Board of the American Psychological Association at Estes Park, Colorado, in 1953. The psychologists unanimously agreed that:

> Everything we have found points to the fact that course work, formal examination requirements, and anything else that could be standardized concerns what is ancillary to research training. What is of the essence is getting the student into a research environment and having him do research with the criticism, advice, and encouragement of others who suffer the same pain and enjoy the same rewards. The heart of the training lies in the (broadly defined) apprenticeship relation. . . (Taylor, et al., 1959, p. 179).

Such strong recommendations have apparently not fallen on deaf ears, for they are reflected not only in the mandated research internship or apprenticeship in the ESEA Title IV training programs, but also in the four million dollar program the National Science Foundation launched just over a year ago to support some 3,700 undergraduate research assistants. This trend toward increased support for research apprenticeship is evidently based on the belief that the apprenticeship is crucial in training the neophyte researcher and helping to establish him in his chosen career.

The arrangements set up by different institutions to provide apprenticeship experience differ as widely as do the institutions themselves. Although practical research experience might be gained through working in a variety of agencies, opportunities for such experience typically are provided within the academic setting. More specifically, the familiar "research assistantship" is the vehicle through which such apprenticeship experience generally is assumed to be gained. The remainder of this paper is focused directly on this single type of "research apprenticeship," research assistantships that are held concurrently with student's academic studies.

Assumptions About Research Assistantships

My real concern is not that research assistantship experience currently seems to be in favor in the educational research community, but rather that this favored role has not been tested adequately. I am concerned that, as an educational research community, we seem to be opting for a training strategy that depends on many untested assumptions.

Let me illustrate my point by listing briefly a few of the assumptions that are often made in relation to research assistantships--assumptions that lack a solid empirical base. I suspect that you will be familiar with most of them, for they tend to be the "coin of the realm" among educational researchers.

(1) First, we generally assume that real research apprenticeship experience is provided to persons who hold research assistantships.

(2) Second, we generally assume that research assistantships have characteristics which make them inherently valuable--that occupancy in such a position is likely to lead the assistant toward a career in educational research.

(3) Third, we generally assume that the longer a person spends as a research assistant (at least up to a point of diminishing returns--perhaps a year or two), the more likely he is to become a researcher in his subsequent career.

(4) Fourth, we generally refer to research assistantships collectively or lump them together for analytic purposes, as if one assistantship experience is like another.

(5) Fifth, we generally assume that research assistantships should be given primarily to doctoral level students.

(6) Sixth, we generally assume that we know how to use research assistants to the mutual benefit of both the researcher and the assistant.

(7) Finally, as educational researchers, we even assume that our assumptions are correct! At least, we seem to be free of any overwhelming compulsions to examine these assumptions systematically.

In the remainder of my paper, I will state several generalizations about research assistantships which I believe can be supported from the relatively small body of hard data which exists on this topic. My primary source of data is a study which Arliss Roaden and I are currently conducting, in which we are analyzing the research assistantship experiences of almost 4,000 persons who are associated with the research community.[1] I will also cite other researchers who have examined this topic.

Before proceeding further, it might be useful to define a few terms that I will use throughout this presentation.

Different Types of Research Assistantships

"Research assistantship" is broadly defined here as any experience concurrent with the student's academic studies in which the student is called or considered a "research assistant," or any other title which denotes to his superiors and/or colleagues that his role or function consists of assisting in the conduct of research.

---

[1]The study referred to here and included in the references following this paper (Worthen and Roaden, 1968) is an interim report reflecting the completion of the first phase of a two-phase study. The second phase, in which the assistantship experiences of 200 of our phase one sample are being analyzed much more intensively, is currently underway.

Intuitively, two quite different kinds of "research assistantship" experience can be identified. Some research assistants engage in research activities during the tenure of their assistantship, others do not. Occupants of this latter group often hold a position entitled "research assistant," but function in administrative, instructional, clinical, or personal support roles. Titles of assistantships are often administratively determined and the correlation of title and function is sometimes low. In this context, "genuine research assistantship" is defined as any experience concurrent with the student's academic studies in which the student holds an assistantship, internship, or associateship in which assisting in the conduct of research is the primary activity. "Ersatz research assistantship" is defined here as any experience concurrent with the student's academic studies in which the student holds a position or functions in a role which is called or considered a research assistantship, but in which assisting in the conduct of research is not the primary activity. Let me emphasize that the crucial--in fact the only--distinction that can be made between the two types of assistantships defined here is whether or not assisting in research was the primary activity of the student.

Without further ado, let me now turn to a consideration of six major generalizations about research assistantships and the presentation of data, where applicable, that support those generalizations.

1. Unverified Assumptions About the Value of Research Assistantships Impede the Use of Empirical Analysis to Advance Knowledge about Critical Elements of Research Training.

If we believe with the Estes Park psychologists that the heart of the training lies in the apprenticeship relation and anything else is ancillary, it certainly tends to eliminate incentives to engage in empirical or even conceptual analysis of other research training components. Similarly, if we assume that research assistantships are inherently beneficial, it is unlikely that much energy will be expended in analyzing the actual nature of research assistantship experience or its relationship to other dimensions of research career development. Our uncritical acceptance of the assumptions doubtlessly goes far to account for the paucity of research dealing with research training in general and with the research assistantship in particular. Even a casual glance at the literature suggests an incongruity between the importance researchers seem to place on research apprenticeship experience and the dearth of solid empirical research that might serve to support the "common-sense" premises. There is simply no accumulating body of knowledge based on systematic study of what research assistants actually do and what proportion of their time they spend doing it.

Perhaps an example will help to illustrate that we can learn a great deal from research on varied facets of research assistantships. For example, there is one crucial question that relates to the efficacy of research assistantships as a recruitment and training device--namely, "What specific assistantship activities are most likely to motivate the research assistant to pursue a career in educational research and, conversely, what specific experiences are most likely to discourage the research assistant from going on to become an educational researcher?" Here is an unanswered, critical question that is susceptible to investigation by empirical research, and it is clear that data could be collected to tip the scales and provide

an unequivocal answer to the question. It is equally clear that such an answer would have wide reaching implications for the development of research training programs. The critical point is that no knowledge currently exists to provide an answer to the question. Assumptions? Yes. Argumentation? In abundance. But knowledge? No.

2. Research Assistantships Are Not Inherently Valuable--Rather, What a Person Does on His Assistantship is Related to What He Does Later in His Career.

In the study cited earlier (Worthen and Roaden, 1968), the relationships between ersatz and genuine research assistantship experiences and subsequent research involvement and research productivity were analyzed.[2] Several important findings were yielded, among them the following; all were statistically significant ($p < .001$).

First, genuine research assistantship experience is positively related to later involvement in educational research and to research productivity. Specifically, if the research assistant engages in research as a major activity during his assistantship experience, he is later likely to spend more time in research, produce more research publications, and receive more research contracts than persons who did not have a genuine assistantship experience.

Second, ersatz research assistantship experience, by itself, is unrelated to either later involvement in research or to research productivity. A person who has never held a research assistantship is just as likely to be involved in research,

---

[2]In this study, research involvement was defined as the percent of total professional time that a person spends on research, as opposed to teaching, administration, or other professional activities. Research productivity was defined as the average annual number of research articles, monographs, books, and reports that a person publishes and research contracts or grants a person receives.

receive research contracts, and produce research publications as a person who has held only an ersatz research assistantship.

Third, and even more damning of ersatz assistantship experience, is its interaction with experience as a genuine research assistant. When an ersatz research assistantship experience is added to a genuine assistantship, the positive relationship between genuine experience and later research involvement changes to a significant inverse relationship. I.e., if a person holds both a genuine and an ersatz research assistantship, he is likely to later spend significantly less time in research than persons who hold only genuine assistantships.

One comment should be made in relation to these findings. Like several studies before it, this study is subject to the criticism that student selectivity might be the causal factor in the correlations between research assistantship experience and later research involvement and productivity. For example, Clark (1957) reported that not only did significantly more of his group of highly productive psychologists hold research assistantships than did his control group of psychologists in general, but similar differences were also found between the two groups on teaching assistantships, fellowships, general assistantships, and even clerical work. Buswell, et al. (1966) also found that there was a positive relationship not only between research assistantship experience and research productivity, but also between teaching assistantship experience and research productivity. Buswell and his colleagues suggested that this difference may be because of the kinds of students selected for teaching assistants, rather than because of the kind of experience they have in their assistantship. This finding, coupled with Clark's, might point to student selectivity as the causal factor.

Students who are awarded assistantships are usually superior to those who receive no such aid. It is conceivable that because of their innate ability, they might have gone on to higher research productivity without any research apprenticeship experience. The findings of Berelson (1960), Sieber (1966), and Clark (1957) also suggest that the competition for graduate assistantships might eliminate those with a lesser research productivity potential and, thus, support the view that student selectivity may be an important explanatory factor.

If the student selectivity factor was operative in the present study, it could be argued that the positive relationship between genuine assistantship experience and later research productivity might be attributable more to selectivity in granting assistantships than to experience in the assistantships per se. However such an argument could not be mounted in relation to ersatz assistantship experience If selectivity in granting assistantships did, in fact, result in research assistants possessing a higher level of talent than persons holding no research assistantship, than an ersatz research experience is even less desirable than portrayed earlier, for more talented students who hold such assistantships prove no more productive than less talented students who hold no research assistantships.

3. Research Assistantships in Education Differ From Research Assistantships in Other Fields, Not Only in Content But Also in Function.

One analysis in the study referred to earlier (Worthen and Roaden, 1968) revealed that ersatz research assistantships are more likely ($p < .001$) to occur in the field of education than in psychology, or any of the other behavioral sciences or cognate disciplines. Conversely, genuine research assistantships are significantly ($p < .001$) more likely to occur in fields other than education. In short,

research assistants in education tend to engage in research significantly less than their counterparts in psychology, sociology, and other fields.

4. Different Types of Research Assistantships May Be Due in Part to Different Ways of Resolving a Basic Dilemma in Managing Research Assistantships.

A dilemma often faced by senior researchers stems from the fact that, on the one hand, they may need help in completing routine work in the interests of research projects--it may be that the long-term assignment of an assistant to a menial task (e.g., keypunching, collating, or scoring tests) is precisely the type of support most needed on his project; on the other hand, the senior researcher has the responsibility for training his research assistant(s) in all aspects of the research process. Such a situation results in a definite "conflict of interest" for the senior researcher between the roles of research producer and research trainer, and this problem is likely to persist as long as universities continue to accept both the training of prospective research workers and production of new knowledge as legitimate functions for the professor-researcher. In such a context, it is understandable that senior researchers are not always able to use their assistants in a genuine apprentice role.

5. Research Assistants Are Ambivalent About the Value of Their Research Assistantships.

Although a majority of research assistants feel positively toward their experience, a sizable minority are not enamored with the opportunities and training afforded by their assistantships. For example, Brown (1962) found that 55 per cent of the students in his sample who held research assistantships were somewhat positive toward their experience, 38 per cent were somewhat negative,

and 7 per cent were strongly negative. Berelson (1960) noted that 46 per cent of his sample of research assistants felt that they were being exploited by their major professors. Abernathy, et al. (1953) reported that 65 per cent of the research assistants in their sample felt that their assistantship time was well spent, whereas 35 per cent felt that it was not time well spent. The old adage about smoke and fire may well be relevant here.

6. If We Accept the Potential Value of the Research Assistantship in Training Educational Researchers and Want to Maximize It, Then We Need to Accelerate Assistantship Opportunities, Recruit Students Earlier in Their Programs, Limit Their Tenure on Their Assistantship, and Assign Them Primarily to Research Projects.

To the extent that research trainers depend upon the traditional model of research apprenticeship training, the quantitative output of research training programs will be severely limited. Given the manpower needs that Clark and Hopkins (1969) have outlined, it is paramount that thought be given to possible ways of increasing the master-apprentice ratio to a point where our present cadre of educational researchers can more readily train the large numbers of persons we need to meet the increasing demands.

Whatever the methods, ways must be found to increase the number of research assistantships if they are to prove useful as a training device. Sieber (1966) noted that only 5 per cent of the graduate students in schools of education have the opportunity for research preparation through project internships. In addition, Buswell, et al. (1966) found that there has been virtually no increase from 1954 to 1964 in the per cent of educational doctoral students holding research

assistantships, despite the inception of the USOE Cooperative Research Program during this decade. While it appeared for a time that the ESEA Title IV research training programs would help to remedy these deficiencies, recent legislative cut-backs have dimmed those hopes, and the projected output of Title IV programs is miniscule in comparison with the number of researchers we need to produce.

Another finding of our study (Worthen and Roaden, 1968) suggests that students should be recruited for research assistantships earlier in their academic sequence.

Most research assistantships (81.3 per cent) occur concurrently with the assistant's doctoral studies. Yet, we found that persons who hold research assistantships at the bachelor's degree level are significantly ($p<.001$) more involved in research in subsequent years (spending 60 per cent of their time in research) than persons who held research assistantships at either the master's (20 per cent) or doctoral degree level (22 per cent). This would seem to cast serious doubts on the wisdom of the USOE's decision to drop the undergraduate training program and throw more support into postdoctoral research fellowships.

Another relevant finding is that there is no relationship between the length of time a person spends as a research assistant and his research involvement or productivity in subsequent years.

Previously, there has seemed to be a general consensus that longer tenure as an assistant should result in better preparation of the student. But if this is true, it is diffucult to determine what the student is better prepared to do, for there is no evidence that this "better preparation" results in more involvement or productivity in subsequent years. Questions might be raised as to whether the

research assistant or the senior researcher is the chief beneficiary when student tenure in research assistantships is prolonged from year to year. The sentiment expressed in that well known historical statement of righteous indignation, "Let my people go!" might also be applicable here.

Another finding of our study suggests that <u>where possible, research assistants should be assigned to research projects rather than to research bureaus or to individual faculty members</u>.

<u>Ersatz</u> assistantships occur significantly more often ($p < .001$) when students are assigned to serve as research assistants to individual faculty members (49 per cent of the <u>ersatz</u> assistantships occur here) than when their assignment is to assistantships in research bureaus (34 per cent) or research projects (17 per cent). Very few <u>ersatz</u> experiences occur from assignment of students to serve as research project assistants. Genuine research assistantships occur significantly more often ($p < .001$) on research projects (41 per cent) than when students are assigned to assistantships in bureaus (27 per cent) or with individual faculty members (32 per cent). Because of the definite relationships between these two types of assistantship and subsequent indices of research participation, there may well be a case for analyzing the research project assistantship intensively and attempting to modify our other assistantships to resemble it more closely.

The above findings, viewed collectively, seem to call for a policy whereby <u>research assistantship experiences should be planned and controlled by those persons most centrally involved in the conduct of research training programs</u>.

Persons responsible for training educational researchers should mandate some control over the assistantship experiences of students preparing to be educational researchers. A minimum type of control, for example, might consist of establishing a departmental committee to approve assistantship assignments only after ascertaining from the prospective supervisor that the assistant will actually spend a major portion of his time engaging in genuine research activities. In addition, periodic monitoring of the assistant's activities might be recommended. While such monitoring may not eliminate the senior researchers' dilemma in deciding whether to emphasize the research producer or research trainer role, it may contribute to efficiency and effectiveness in arriving at the best possible mix between the two.

Conclusion

In conclusion, it would appear that a research assistantship could be the most valuable training experience a prospective researcher might have; but it also appears that it often falls far short of its potential as a training device. I have argued that it is paramount that the folklore surrounding research assistantships be investigated in order to assess empirically the utility of such positions for training educational researchers. More specifically, we must discover that aspects of such experiences are most influential in motivating the assistant toward and preparing him for a productive research career. I am less concerned about whether you accept my particular generalizations and conclusions than I am about whether you accept the fact that present patterns of utilizing research assistants need to be submitted to scrutiny. What is critical here is that as researchers we

cease to allow research assistantships to be haphazard and void of research training value, as so often seems to be the case at present. In view of the crucial shortage of educational researchers, educators can ill afford to foster any type of experience which is inversely related to subsequent career development in educational research.

REFERENCES

Abernathy, Margaret G., Melton, R., and Keller, R. J. An Analysis of the Characteristics, Duties and Responsibilities of Graduate Assistants at the University of Minnesota; Part I: A Tabular Summary of Type of Appointment and Proportion of Time. Minneapolis: Bureau of Instructional Research, University of Minnesota, 1953.

Berelson, B. Graduate Education in the United States. New York: McGraw-Hill, 1960.

Brown, D. G. "A Student Evaluation of Research Assistantships," Journal of Higher Education. November 1962, 33, 436-442.

Buswell, G. T. "Research Training in Doctoral Programs in Education." Paper read at an American Educational Research Association Symposium in Atlantic City, February 1962.

Buswell, G. T., McConnell, T. R., Heiss, Ann M., and Knoell, Dorothy M. Training for Educational Research. Berkeley: University of California Center for Research and Development in Higher Education, 1966 (Final Report of USOE CRP Project No. 51074).

Clark, K. E. America's Psychologists. Washington, D. C.: American Psychological Association, 1957.

Clark, D. L., and Hopkins, J. E. A Report on Educational Research, Development, and Diffusion Manpower, 1964-1974. Bloomington: Indiana University Research Foundation, 1969 (Final Report of USOE CRP Project).

Sieber, S. D. The Organization of Educational Research. New York: Columbia University Bureau of Applied Social Research, 1966 (Final Report of USOE CRP Project 1974).

Taylor, D., et al. "Education for Research in Psychology," American Psychologist, 1959, 14, 167-179.

Worthen, B. R., and Roaden, A. L. The Impact of Research Assistantship Experience on the Subsequent Career Development of Educational Researchers. Columbus, Ohio: The Ohio State University Evaluation Center, 1968. (Interim Report to Phi Delta Kappa International).